

:

:

. []

. []

PSCAD/EMTDC

[]

% %

%

. []

%

%

PSCAD/EMTDC

%

/

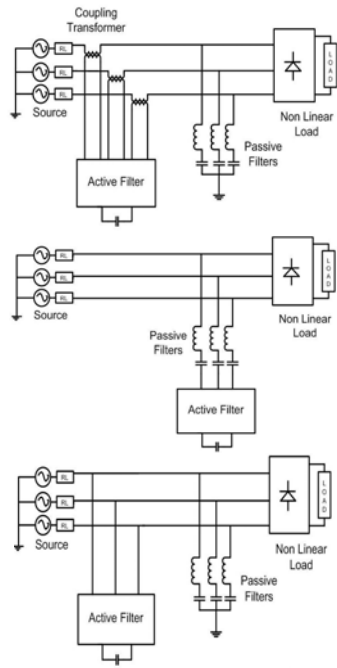
/

/

■

■

■



()

PSCAD/EMTDC

/

()

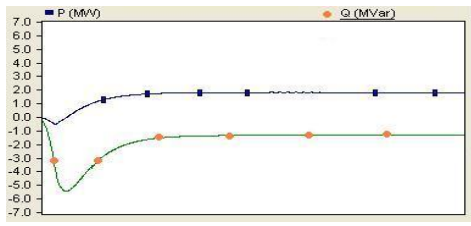
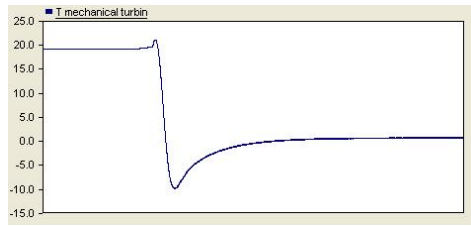
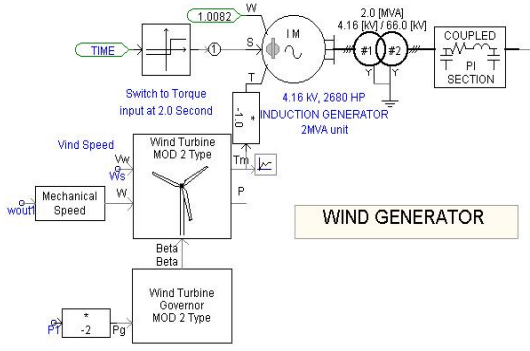
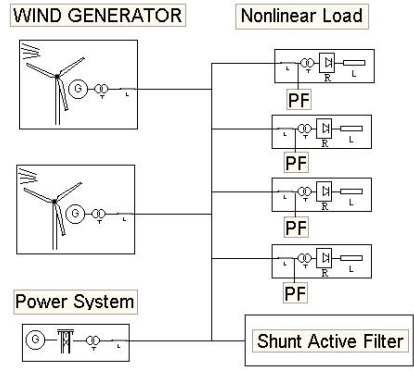
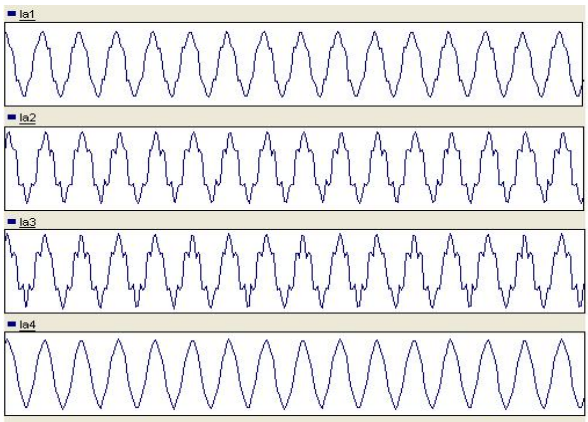
()

() ()

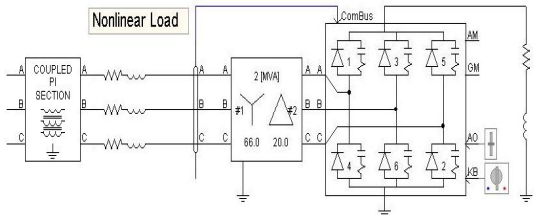
()

THD

()



THD



$$C_{PF} = 10\mu f \quad L_{PF} = 28mH$$

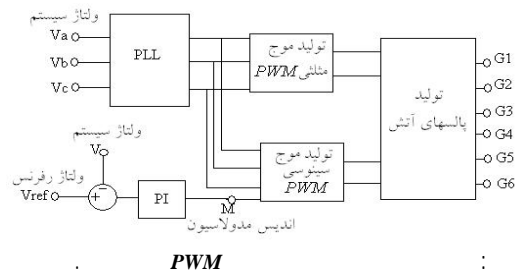
PWM

PSCAD/EMTDC

()

THD

PWM



- [1] T. Tran-Quoc, C. Andrieu, N. Hadjsaid, "Technical impacts of small distributed generation units on LV networks", *IEEE Power Engineering Society General Meeting*, 2003, Vol. 4, July 2003.
- [2] F. M. Gatta, F. Iliceto, S. Lauria, P. Masato, "Modelling and computer simulation of dispersed generation in distribution networks, Measures to prevent disconnection during system disturbances", *IEEE PowerTech Conf.*, June 2003.
- [3] A. Agustoni, M. Brenna, R. Faranda, E. Tironi, C. Pincella, G. Simioli, "Constraints for the interconnection of distributed generation in radial distribution systems", *IEEE 10th Int. Conf. on Harmonics and Quality of Power*, Vol. 1, pp. 310-315, Oct. 2002.
- [4] S. A. Papathanassiou, N. D. Hatziargyriou, "Technical requirements for the connection of dispersed generation to the grid", *IEEE Power Engineering Society Summer Meeting*, Vol. 2, pp. 749-754, July 2001.
- [5] Z. Chen, F. Blaabjerg, J. K. Pedersen, "A hybrid compensation system with an active filter and distributed passive filters in power systems with dispersed generation", *IEEE 34th Annual Conf. on Power Elec. Spec.*, Vol. 2, pp. 767-772, June 2003.

()

THD

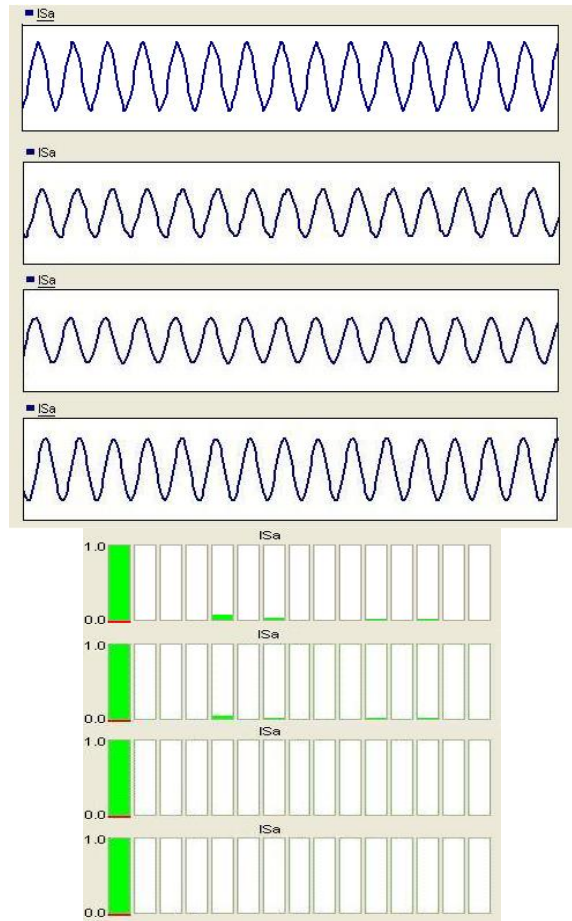
()

THD :

2.4 kV
2.77 kA
376.99 rad/s.
0.066 pu
0.298 pu
0.018 pu
0.046 pu
3.86 pu
0.122 pu
0.105 pu
0.008 pu

h_7	h_5	%THD	()
0.031	0.1531	16.04	
0.0022	0.0007	0.33	
0.0063	0.0343	3.64	
0.0011	0.0005	0.2	

2 MVA
2 MVA
376.99 rad/s.
38 m
4500 m ²
1.229 kg/m ²
0.97



h_7	h_5	%THD	L_{series} [mH]	R_{series} [Ω]	Tyristor on angle	L_{Load} [mH]	R_{Load} [Ω]
0.0524	0.1492	17.10	0.635	0.265	38	100	100
0.759	0.2765	30.91	1.3	0.525	85	400	25
0.1161	0.1749	32.04	2	0.35	75	250	132
0.0521	0.2968	23.38	10	0.3	50	300	20